

Automating Work-Time and Attendance Recording on an Intranet

Money is saved through reduction in processing time and prevention of errors.

Goddard Space Flight Center, Greenbelt, Maryland

The OMNI time and attendance system is a workstation software system for automated, centralized recording of work time and attendance, and for flexible scheduling of work by employees in an organization. The OMNI system makes it unnecessary to perform the time-consuming and error-prone tasks of preparing, copying, transporting, or in any other way using or handling paper time cards or other paper records.

Unlike most commercial intranet client/server "groupware" designed for paperless office operations, the OMNI software is not difficult to learn, is not loaded with extra "features" that most organizations do not need, and is compatible with a variety of computers and operating systems. The OMNI software was developed, from the start, to take advantage of popular Web-browser programs (Netscape, Mosaic, and Internet Explorer) installed in many computer workstations.

The OMNI time and attendance software comprises approximately 20 computer scripts in Practical Expression and Report Language (PERL). These scripts run on a Unix workstation that supports a World Wide Web (WWW) server. Preferences can be changed by use of scripts. Administrators can use other scripts to gain access to and to change pertinent information. Supervisors can run still other scripts to obtain summary data and reports.

Employees log into the OMNI system from remote computer terminals and identify themselves to the system by selecting their names and entering passwords. The system responds to each employee by displaying, in a time-card format (see figure), the employee's work-time information as of the most recent previous entry. (This information is recorded in a database maintained by the system.) The employee can update the information by changing job order numbers (referenced by names) and/or numbers of hours worked. The employee can also enter such information as requests for leave and flexible work schedules.

When the employee has finished updating the time-card information, the employee can save the information with or without submitting it for official recording by the system. When the employee submits the information to the system, several things happen:

- The system records the information in the database for retrieval next time.
- By electronic mail, the system sends the electronic equivalent of the employee's time card to a timekeeper.

Once the electronic equivalents of time cards from all employees have been received and approved, the information from the databases is printed on time-card stock paper and sent to a payroll-processing system.

Anyone familiar with the World Wide Web can use the OMNI system. Moreover, because the OMNI system runs on an ordinary WWW server on an intranet, it is easily useable in many areas. The performance of the OMNI system for an organization is limited only by the design of the organization's intranet.

In an organization that has a high employee-to-supervisor ratio, the automation of administrative processes by use of OMNI software on an intranet is a quick and inexpensive way to save time across the workplace. For example, in an application to the former Flight Dynamics Systems Branch at Goddard Space Flight Center, the cost of implementing the OMNI system was less than one person×month of effort. Once the OMNI system was in operation, the amount of time spent processing time-card information became 10 minutes per pay period, whereas it took 10 hours per pay period to process time cards in the former paper system. An additional benefit afforded by the OMNI system is an on-line database that can be used to store and track project expenditures by employee; this makes it easier for supervisors to satisfy staffing requirements and to make accurate estimates of future expenditures by project.

NetScape: Time Card Omni

Location: <http://www.nasa.gov/centers/goddard/omni/timecard.pl?553>

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TIME AND ATTENDANCE WORKSHEET OMNI

Pay Period: 08/17/1997 - 08/30/1997

Name: _____


Job Order Number	Time Class	1st Week Hours					2nd Week Hours					1st+2nd Totals
		Mon	Tue	Wed	Thurs	Fri	Mon	Tue	Wed	Thurs	Fri	
PWS (personnel)		9	9	9	9	8	9	9	9	9	0	80
MOET Search	REG	4	4	4	4	4	4	4	4	4		64
Mgmt-Innovator	REG	2	2	2	2				1	1		12
Mgmt-Rx-Engineers	REG	3		3					1	1		8
												00

Which Action:
☐ Submit Time Card (Receive no. ☐ , Re-invent ☐)
☒ Update Display (Number of Jobs ☐ display technique ☐)
☐ Save without Submit

Process Action

Web Help

Questions or Comments? Email David Hertzog

 **Goddard Strategic Plan Key Elements: Mission 5 -**
We accomplish everything through innovation in all that we do.

This Example of a Time-Card Entry Page was generated in the OMNI system and displayed by use of Netscape.

This work was done by David Matusow and Joe Sparmo of Goddard Space Flight Center. For further information, access the Technical Support Package (TSP) free on-line at www.nasatech.com under the Software category. GSC-13973.